Name: _____

Maths Genie Stage 2

Test D

Instructions

• Use **black** ink or ball-point pen.
• Answer all questions.
• Answer the questions in the spaces provided
— *there may be more space than you need.*
• Diagrams are **NOT** accurately drawn, unless otherwise indicated.
• You must **show all your working out.**
• **Calculators may not be used.**

Information

• The marks for each question are shown in brackets
— *use this as a guide as to how much time to spend on each question.*

Advice

• Read each question carefully before you start to answer it.
• Keep an eye on the time.
• Try to answer every question.
• Check your answers if you have time at the end

mathsgenie.co.uk

1 Write 95.4̇6 correct to one decimal place.

_95.5_

(Total for Question 1 is 1 mark)

2 Write 37 correct to 1 significant figure.

_40_

(Total for Question 8 is 1 mark)

3 Andrew is going to have a meal.
He can choose one starter and one main from the menu.

<div style="border:1px solid">

Menu
Main   **Dessert**

Lasagne   Ice Cream
Pizza   Cake
Salad   Fruit

</div>

Write down all the possible combinations Andrew can choose.

Lasagne, Ice Cream   Pizza, Ice Cream   Salad, Ice Cream

Lasagne, ~~Fruit~~ Cake   Pizza, Cake   Salad, Cake

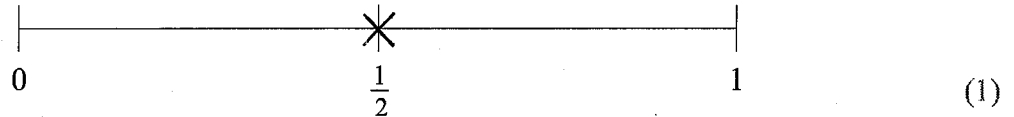Lasagne, Fruit   Pizza, Fruit   Salad, Fruit

1 mark for just 1 error

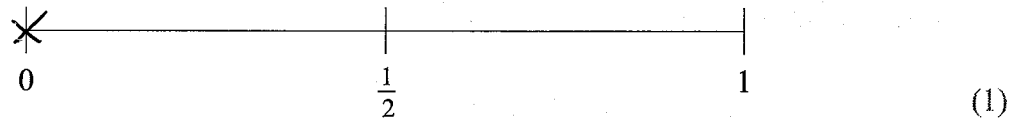**(Total for Question 3 is 2 marks)**

4 There are 10 marbles in a bag.

5 marbles are red.
3 marbles are blue.
2 marble is green.

On marble is selected at random from the bag.

(a) On the probability scale mark with a cross (X) the probability that the marble is red.

$$\vdash\!\!-\!\!-\!\!-\!\!-\!\!\underset{\times}{\vdash}\!\!-\!\!-\!\!-\!\!-\!\!\dashv$$

0          $\frac{1}{2}$ 1

(1)

(b) On the probability scale mark with a cross (X) the probability that the marble is yellow. .

0          $\frac{1}{2}$ 1

(1)

(c) Write down the probability that marble is blue.

$\frac{3}{10}$

(1)

(Total for Question 4 is 3 marks)

---

5 An adult cinema ticket costs £x
The price of a child's ticket is £5 more than the price of an adult ticket.

Write an expression for the price, in pounds, of a child's ticket.

£ $x + 5$

(Total for Question 5 is 1 mark)

---

6 Charles has m marbles.
Rosalind has twice as many marbles as Charles

Write an expression for the number of marbles Rosalind has.

$2m$

(Total for Question 6 is 1 mark)

7 Work out 24.6×9

```
      2  4  6
   x        9
   ──────────
      4  5
   2  2  1  4
```

1 mark for just 1 error

2 2 1 . 4

(Total for Question 7 is 2 marks)

8 Work out $3254 - 947$

```
   2  1     4     1
   3  2  5  4
   -     9  4  7
   ──────────────
   2  3  0  7
```

1 mark for just 1 error

2 3 0 7

(Total for Question 8 is 2 marks)

9 Work out $7.1 + 10.92 + 368$

```
   3  6  8 . 0  0
      1  0 . 9  2
   +     7 . 1  0
   ───────────────
   3  8  6 . 0  2
```

1 mark for just 1 error

3 8 6 . 0 2

(Total for Question 9 is 2 marks)

10   (a) Simplify $a \times 2 \times 5$

$$\underline{10a}$$
(1)

(b) Simplify $b \times b$

$$\underline{b^2}$$
(1)

(c) Simplify $\dfrac{2y + 6y}{2}$

$$\dfrac{8y}{2}$$

$$\underline{4y}$$
(1)

(Total for Question 10 is 3 marks)

11   Work out $516 \div 6$

6
12
18
24
30
36
42
48
56
60

$$6 \overline{)5\,^5 1\,^3 6}\;\; {}^{0\;8\;6}$$

1 mark for just 1 error

$$\underline{86}$$

(Total for Question 11 is 2 marks)